









head of all the Volunteers in India, was placed on general duty, and spent his time in travelling from place to place. It was at this period that he wrote a series of extraordinary letters in one of which he thought of all the private individuals he met, the lives they led, the way they dressed and what they said, the hospitality they did or did not dispense; and so on. Then he started off to Madagascar to help the Madagascars against the French. This was a trifle, too much for the Government of India. He was stopped at Zanzibar and ordered back to this country at once. He next made a somewhat foolish attempt to reach Upper Burma from Chittagong, and after this last wild goose chase he went home for good, and from thence we have continued to hear from him from time to time in connection with the Balloon Society and the wrongs of the poor. General Brine in his younger days had a great love of the stage, and used to boast that he took an opera company over to Dublin for two or three seasons until the Duke of Cambridge "pulled him up." At the time of the Malta Expedition he hastened down to Bombay, and wanted Mr. Wilson, of Wilson's Circus, to join him in taking the Circus to Malta. Mr. Wilson declined on the very sensible plea that Colonel Brine did not look like a business man. He was originally a brilliant talker and always a kind-hearted man, and in spite of his old dislike to the Civil Service and other eccentric fads that grew upon him with advancing years. He was, while in India, the centre of many very pleasant myths. He always claimed the credit, and we think with some justice, of having introduced the postage stamp into India. Time after time he addressed the Postmaster-General on the subject, and was eventually told to mind his own business. This put him on his mettle. He had his own post-cards printed. They were identical with the post-cards then in use at home, except that in the space where the stamp ought to be there was printed in small type "here affix a half anna stamp." These cards, a number of which were printed at our office, were distributed broadcast to clubs and institutions; Colonel Brine used them himself in his correspondence with the Postmaster-General. Life put on the ordinary letter stamp and succeeded in proving that it was perfectly legal to write his letter on its cover if he chose. Shortly afterwards the quarter anna post card was introduced, and Colonel Brine was of course, vastly delighted. "Fred Brine's post cards" are now among the most precious possessions of the Indian stamp collector.

## CONCERNING EARTHQUAKES.

What causes the earthquake and the not less mysterious and terrible volcano? In them we have the highest manifestations of natural force, phenomena which excite and terrify the imagination and impress man with a sense of his utter feebleness. Through their agency cities have been destroyed, vast tracts of the earth's surface completely changed, and enormous numbers of human beings have lost their lives. The earthquake that occurred in Sicily in 1693 overthrew 34 cities and towns and 300 villages; of Catania and its 18,000 inhabitants not a trace remained, and it is computed that more than 100,000 lives were lost. The earthquake of Pekin in 1731 swallowed up 100,000 persons. About 25 years later, in the same century, occurred the great earthquake at Lisbon. In about eight minutes 50,000 inhabitants were swallowed up and whole streets buried in the cities of Coimbra, Oporto, and Braga suffered severely, and St. Ubes was wholly overthrown; in Spain a large part of Malaga became ruins; one-half of Fez, in Morocco, was destroyed, and more than 12,000 inhabitants perished; above half of the island of Madeira became waste, and 2000 houses in the island of Metelen, in the archipelago, were overthrown; 1000 miles, even as far as the distance of 1000 miles, were felt for a distance of 1000 miles. In 1759 an earthquake occurred in Syria, which extended over 10,000 square miles, and Baalbek was destroyed. In 1780 one occurred at Tauris, which overthrew 15,000 houses and buried multitudes of people. In 1797 the whole country between Santa Fe and Panama was destroyed, including Cuba and Quito, and 40,000 people, it is said, were buried in one second. In 1840 a destructive earthquake occurred at Mount Ararat, in the Turkish province of Armenia, when 317 houses were overthrown and large numbers of persons perished. One which occurred at Rhodes and Macri in 1851 caused a mountain to fall in, crushing a village and destroying 600 persons. In the same year, Meif, in South Italy, was almost laid in ruins, and 14,000 lives were lost. An earthquake occurred in Syria, Palestine, and Asia, in 1745, which destroyed 50 towns and occasioned a loss of life that surpassed calculation. It is computed that in the course of 75 years, from 1785 to 1859, the kingdom of Naples lost at least 111,000 inhabitants by the effects of earthquakes, or more than 1,100 a year, out of an average population of 6,000,000; and that more than 13,000,000 of the human race have been destroyed by earthquakes of which there is record. Even within the past few years there have been fearful losses of life by these earth convulsions, on the shores of the Mediterranean and nearer to this country, of more recent date, at Krakatoa. It were needless to attempt further enumeration. The terrible nature of these visitations and the great calamities which are too well understood, have led men to wonder at what they give no premonition of their coming, or none that is understood, have led men with awe. As to the cause or origin of these phenomena various hypotheses have been put forward. When they have accomplished their mission of destruction and upheaval, people living in the neighbourhood of the convulsed earth have recalled to mind peculiar conditions of the atmosphere, among other accompaniments, irregularities in the seasons, sudden gusts of wind interrupted by dead calms, violent rains at unusual seasons, or in countries where such phenomena are almost unknown; a reddening of the sun's disc, and a hush in the air often continued for months; an evolution of electric matter or of inflammable gas from the soil, with sulphurous or mercurial vapours; noises underground like the running of carriages or the discharge of artillery, distant thunder; animals uttering cries of distress and evincing extraordinary alarm; a sensation like earthquakes. These accompaniments were regarded as amongst the results of the operation of volcanic power which upheaved or occasioned the swallowing up of portions of the globe's crust. Indeed, Shakespeare may be said to have embodied all that was known regarding nature's mysterious workings, even up to a comparatively recent date, when he wrote:

effects in a paper published in *Harper's Magazine*. Increased knowledge will not lessen man's fear; but in proportion as nature is less mysterious, his mind will be freer from superstition.

Subterranean disturbances have been ascribed to oscillations in the molten interior of the earth, to its reaction upon the crust, to the enormous structures of that crust, and to the enormous forces that admit the percolation of water down to the interior of the earth. By this means steam is generated and superheated, and a Titanic force created which nothing can imprison. Although subterranean disturbances may be the true cause of all great earthquakes and eruptions, there can be little doubt, Mr. Proctor thinks, that the occasion of those disturbances is often, if not always, to be sought outside the earth's crust. He doubts whether the process of convection, which is going on all the time with greater or less activity, although generating enormous supplies of subterranean heat, might not, nevertheless, proceed without producing great subterranean disturbances were it not for external changes which intensify its action, sometimes resisting its effects, sometimes assisting them, and so making their disturbing energies much greater than they otherwise would be. He takes into consideration not alone the crust that has been formed over what is generally believed to be a molten interior and the thermal forces operating beneath that crust, but also the atmosphere that envelopes it. One of the most important properties of this atmosphere, as we all know, though we are accustomed to pay little heed to it, is its weight or pressure; and we also know that there are constant variations in this pressure. Now Mr. Proctor makes use of these important facts in laying down his hypothesis to account for the phenomena of earthquakes, and they are facts which have not before received that consideration from scientific men to which they are entitled. When we hear that the barometer has risen or fallen a half an inch, we do not commonly attach much importance to the change, yet it might so modify the conditions of equilibrium as to bring about an earthquake. Let us follow Mr. Proctor in his calculation, the results of which are marvellous. He teaches us in an instructive and impressive way that violent subterranean action may be produced by causes that nothing but a refined observation could detect. When the barometer rises half an inch over an area of 10,000 square miles, the pressure on that area is increased by 4,000,000,000 tons. If a wave of atmospheric pressure passed over the United States in such a way that over the eastern half of the States the barometer were first half an inch lower than in the western half, and then half an inch higher, the effect would be as though a mass of about 700,000,000,000 tons were shifted from the western to the eastern half of the United States. Again, an increase of one inch in the height of the mercurial barometer corresponds to a weight of 650 pounds to each square foot, or about 85,200 tons on each square mile of surface. As we have said, this atmospheric or air pressure is variable, and it is easy to perceive that a constant variation of pressure may exert a powerful influence on the earth's crust and affect its equilibrium. If the pressure were uniform at all times, the equilibrium would not be so liable to disturbance, or would only be subject to disturbance through those mechanical agencies operating beneath the crust. In times of great storm the mercury changes rapidly in height, and this as Mr. Proctor points out, corresponds to the rapid addition or removal of many thousands of millions of tons to and from the areas of rising and falling barometers. These changes are incessant; and though to the casual observer they appear insignificant, their importance is realized after a little reflection, a condition of the atmosphere that is sufficient to maintain an equilibrium may be changed in an hour, and an earthquake or earthquake may result. As for the hurricanes and other atmospheric disturbances that have followed earthquakes, Mr. Proctor's theory is that, instead of the earthquakes producing them, it is far more likely that the hurricanes and earthquakes were alike produced (the hurricanes chiefly) by the atmospheric depression which preceded the subterranean disturbances.

If the air exercises so great mechanical force, what must be the effect of the sea with its ever-recurring tides and changes of level? And in considering this part of the question it is well to bear in mind that nearly all great subterranean disturbances take place close by, or at all events not very far from, the sea. The natural explanation of this is that the water, finding its way to the internal heat force, or incandescent steam, is changed by the heat into steam, which, superheated under great pressure, assumes an expansive power which breaks through all barriers and finds vent in the volcano and earthquake. Conceding the point that the interior of the earth is an incandescent mass, we may consider for a moment how the water reaches this region of intense heat and an explanation is afforded, in part if not in whole, by the constantly changing pressure of the sea along the shores. If it be so, Mr. Proctor's calculation, which we shall understand better when an enormous weight may be added to the submerged part of the earth's crust by a changing tide, or a low and outflow. "Take a straight shore line 500 miles in length, and suppose that along this shore line a region of ocean 100 miles broad rises through a height of three feet, under the combined action of sun and moon raising a tidal wave, and favouring strong winds urging the water shoreward, then we have 50,000 square miles of sea water; three feet deep, added as so much dead weight to that part of the earth's crust which underlies the sea along that shore. Each square mile contains in round numbers 27,000,000 square feet. The additional weight therefore corresponds to 136,000,000,000 tons." The existence of a precipitous shore line indicates, in his opinion, the comparative weakness of the crust along that coast. It has yielded on one side to pressure thrusting it upwards above the sea level, and on the other side to the pressure of water forcing it downwards. Although the existing shore line may not coincide with the actual line of yielding, it may be taken for granted that not far from every precipitous shore line lies a line of weakness where the crust has given way in the past, and may give way again.

Mr. Proctor's hypothesis may at least be accepted as a partial explanation of the phenomena of which this paper treats. We have still the fact facing us, that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it is in the gradual uprising of that crust which is going on in many parts of the world, and the equally gradual sinking of other parts. These motions do not stop suddenly, as if they were subject to the variations of atmosphere. It is evidently an active and continuous force that is at work. Mr. Proctor, however, as we have said, has increased our knowledge of nature's laws, and we are enabled to see that the volcanic power which is born or fed, as it were, by the heat of the earth's crust, is ever exerting itself, and that it



## Commercial.

## CLOSING QUOTATIONS.

Hongkong and Shanghai Bank—203 per cent. premium, buyers.  
 Union Insurance Society of Canton—\$100 per share, buyers.  
 China Traders' Insurance Company—\$70 per share, buyers.  
 North China Insurance—Tls. 340 per share, sellers.  
 Canton Insurance Company Limited—\$120 per share, buyers.  
 Yangtze Insurance Association—Tls. 84 per share, sellers.  
 On Tai Insurance Company, Limited—Tls. 150 per share.  
 Hongkong Fire Insurance Company—\$355 per share, buyers.  
 China Fire Insurance Company—\$86 per share, buyers.  
 Hongkong and Whampoa Dock Company—\$63 per cent. premium, sales and buyers.  
 Hongkong, Canton, and Macao Steamboat Co.—\$251 per share, sellers.  
 China and Manila Steam Ship Company—110 per share, buyers.  
 Hongkong Gas Company—\$135 per share, sellers.  
 Hongkong Hotel Co.'s Six per cent. Debentures—\$501.  
 Indo-China Steam Navigation Company, Limited—30 per cent. div. sellers.  
 Douglas Steamship Company—\$56 per share, buyers.  
 China Sugar Refining Company, Limited—\$175 per share, sellers.  
 Luxon Sugar Refining Company, Limited—\$95 per share, sellers.  
 Hongkong Ice Company—\$95 per share, sellers.  
 Hongkong and China Bakery Company, Limited—\$80 per share.  
 Hongkong Daily Farm Co., Limited—\$10 per share, sellers.  
 A. S. Watson & Co., Limited—\$21 per share, buyers.  
 Chinese Imperial Loan of 1884 B—21 per cent. premium, sellers.  
 Chinese Imperial Loan of 1884 C—5 per cent. premium, buyers.  
 Chinese Imperial Loan of 1886 E—11 per cent. premium.  
 Hongkong Rone Manufacturing Company, Limited—\$110 per share, buyers.  
 The Hongkong Steam Laundry Co., Ltd.—\$25 per share, nominal.  
 Punjion and Sanghe Dua Samantian Mining Co.—\$91 per share, sellers.  
 The Rumb Gold Mining Co., Ltd.—\$21 per share, sellers.  
 The Balmoral Gold Mining Co., Limited—\$14 per share, buyers.  
 Hongkong and Kowloon Wharf and Godown Company—\$81 per share, nominal.  
 Tonquin Coal Mining Co.—\$250 per share, buyers.  
 The Hongkong High-Level Tramway Co., Limited—\$115 per share, buyers.  
 The East Borneo Planting Co., Limited—\$15 per share, sellers.  
 H. G. Brown & Co., Ltd.—\$45 per share, sellers.  
 The Seng Kee Koyah Planting Co., Ltd.—\$10 per share, sellers.  
 Cruickshank & Co., Ltd.—\$40 per share, nom.  
 The Steam Launch Co., Limited—nominal.  
 The Austin Arms Hotel and Building Co., Ltd.—50 per cent. div. sellers.  
 The China-Borneo Co., Ltd.—\$15 per share, sales.  
 The Dargel Bay Trading Co., Ltd.—\$8 per share, nominal.  
 The Hongkong Brick and Cement Co., Ltd.—\$18 per share, sellers.  
 The Green Island Cement Co.—\$30 per share, buyers.  
 The Hongkong Land Investment Co., Ltd.—\$93 per share, sellers.  
 The Hongkong Electric Light Co., Ltd.—\$51 per share, sellers.  
 Geo. Fenwick & Co., Limited—\$22 per share, sellers.  
 The West Point Buildings Co., Ltd.—\$35 per share, sellers.  
 The Peak Hotel and Trading Co., Ltd.—\$5 per share, sellers.  
 The Labuk Planting Co., Ltd.—\$17 per share, nominal.  
 The Lamag Planting Co., Ltd.—\$15 per share, sellers.  
 The Jelebu Mining and Trading Co., Ltd.—\$41 per share, sellers.  
 The Selama Tin Mining Co., Ltd.—\$21 per share, sellers.  
 The Shumeng Hotel Co., Ltd.—\$5 per share, nominal.  
 The Kowloon Land Investment Co., Ltd.—\$18 per share, sellers.  
 The Trust and Loan Co. of China and Japan—\$14 per share, sellers.  
 The Hongkong Marine, Limited—par, nominal.

## EXCHANGE.

ON LONDON.—Bank, T. T. 3/6  
 Bank Bills, on demand 3/7  
 Bank Bills, at 4 months' sight 3/7 1/2  
 Credits at 4 months' sight 3/7 1/2  
 Documentary Bills, at 4 months' sight 3/7 1/2  
 ON PARIS.—Bank Bills, on demand 4/53  
 Credits, at 4 months' sight 4/63  
 ON INDIA, T. T. 22/28  
 On Demand 22/23  
 ON SHANGHAI.—Bank, T. T. 72  
 Private, 30 day's sight 72 1/2

## MAILS EXPECTED.

THE ENGLISH MAIL.  
 The P. & O. S. N. Co.'s steamer *Pekin*, with the outward English mail, left Singapore on the 15th instant at 9 a.m., and may be expected here on the 20th.  
 THE AMERICAN MAIL.  
 The O. & O. S. S. Co.'s steamer *Oceanic*, with mails, &c., from San Francisco to the 26th ult., left Yokohama on the 15th instant, and may be expected here on the 21st.  
 THE CANADIAN MAIL.  
 The Canadian Pacific Steamship Co.'s steamer *Parthia*, with the Canadian mail, from Vancouver, left Yokohama for Nagasaki, Shanghai, and Hongkong on the 8th instant.

## STEAMERS EXPECTED.

The steamer *Alberta*, from Liverpool, left Singapore on the morning of the 13th instant, and is due here on the 19th.  
 The P. & O. S. N. Co.'s steamer *Ancona*, left Nagasaki on the 16th instant at 6 p.m., and is due here on the 20th.  
 The China Shippers' Mutual S. N. Co.'s steamer *Pingru*, from Glasgow and Liverpool, left Singapore on the 17th instant, and may be expected here on the 22nd.  
 The Austro-Hungarian Lloyd's S. N. Co.'s steamer *Milwaukee*, left Singapore to-day, and is expected to arrive here on the 22nd instant.  
 The P. & O. S. N. Co.'s extra steamer *Thibet*, left Bombay on the 8th instant at noon for this port, and is due here on the 25th.

## CHINA COAST METEOROLOGICAL REGISTER.

16th July, 1890.—At 4 p.m.

STATION.	Barom.	Therm.	Humid.	Wind.	Dir.	Force.	State of Sky.	Remarks.
Wanchow	29.74	65	85	SW	3	1	Cloudy	
Nagasaki	29.74	65	85	SW	3	1	Cloudy	
Shanghai	29.74	65	85	SW	3	1	Cloudy	
Amoy	29.74	65	85	SW	3	1	Cloudy	
Swatow	29.74	65	85	SW	3	1	Cloudy	
Hongkong	29.74	65	85	SW	3	1	Cloudy	
Canton	29.74	65	85	SW	3	1	Cloudy	
Macao	29.74	65	85	SW	3	1	Cloudy	
Hainan	29.74	65	85	SW	3	1	Cloudy	
Yokohama	29.74	65	85	SW	3	1	Cloudy	
Manila	29.74	65	85	SW	3	1	Cloudy	

17th July, 1890.—At 10 a.m.

STATION.	Barom.	Therm.	Humid.	Wind.	Dir.	Force.	State of Sky.	Remarks.
Wanchow	29.68	67	88	SW	3	1	Cloudy	
Nagasaki	29.68	67	88	SW	3	1	Cloudy	
Shanghai	29.68	67	88	SW	3	1	Cloudy	
Amoy	29.68	67	88	SW	3	1	Cloudy	
Swatow	29.68	67	88	SW	3	1	Cloudy	
Hongkong	29.68	67	88	SW	3	1	Cloudy	
Canton	29.68	67	88	SW	3	1	Cloudy	
Macao	29.68	67	88	SW	3	1	Cloudy	
Hainan	29.68	67	88	SW	3	1	Cloudy	
Yokohama	29.68	67	88	SW	3	1	Cloudy	
Manila	29.68	67	88	SW	3	1	Cloudy	

The barometer is a type of aneroid. The barometer has been used in the station for some time. The barometer is a type of aneroid. The barometer has been used in the station for some time. The barometer is a type of aneroid. The barometer has been used in the station for some time.

## HONGKONG TEMPERATURE.

From Messrs. Geo. Fenwick & Co.'s Register.	Today.
Barometer—5 a.m.	29.68
Barometer—1 p.m.	29.68
Barometer—5 p.m.	29.68
Thermometer—5 a.m.	67
Thermometer—1 p.m.	67
Thermometer—5 p.m.	67
Thermometer—4 p.m. (Wet bulb)	67
Thermometer—5 p.m. (Wet bulb)	67
Thermometer—Minimum (Wet bulb)	67
Thermometer—Minimum (Wet bulb)	67

## Shipping.

ARRIVALS.  
 HALCYON, American schooner, 61, A. Metcalf, 16th July, Yokohama 9th June, Ballast.—Master.  
 MUTINE, British sloop, 1,130 tons, 1,120 horsepower, 10 guns, Commander J. H. Martin, 16th July, Amoy 15th July.  
 ALWINE, German steamer, 400, A. Bendixen, 16th July, Pakhoi 15th July, and Hallow 15th, General.—Wieler & Co.  
 AJAX, British steamer, 1,500, Rawlings, 17th July, London 3rd June, and Singapore 11th July, General.—Butterfield & Swire.  
 FUSHUN, Chinese steamer, 1,504, A. Croad, 17th July, Whampoa 17th July, General.—C. S. N. Co.  
 CANTON, British steamer, 1,110, J. Hogg, 17th July, Whampoa 17th July, General.—Jardine, Matheson & Co.  
 HATIAN, British steamer, 1,183, S. Ashton, 17th July, Fochow 13th July, Amoy 15th, and Swatow 16th, General.—D. Laprak & Co.  
 AMOY, German steamer, 811, Th. Lehmann, 17th July, put back.—Siemssen & Co.  
 DIAMOND, British steamer, 1,050, A. S. Snow, 17th July, Singapore 11th July, General.—Ban Moh.  
 ASAGAO, Japanese steamer, 1,521, H. Selck, 17th July, Nagasaki 12th July, Coal.—Mitsui Bishi Colliery.  
 CLEARANCES AT THE HARBOUR OFFICE.  
 Hector, British steamer, for Singapore, &c. Alwina, German steamer, for Hallow.  
 Halphong, British steamer, for Swatow, &c. Landseer, American ship, for New York.  
 Canton, British steamer, for Swatow, &c.  
 DEPARTURES.  
 July 17, *Taiheung*, German ship, for Whampoa.  
 July 17, *Maria*, German steamer, for Halphong.  
 July 17, *Natal*, French ship, for Saigon, &c.  
 July 17, *Heitor*, British ship, from Singapore, &c.  
 July 17, *Canton*, British ship, for Swatow, &c.  
 July 17, *Edendale*, British steamer, for Kutchinot.  
 July 17, *Kremlind*, British steamer, for Yokohama, &c.  
 PASSENGERS—ARRIVED.  
 Per *Alwina*, six, from Pakhoi, &c.—70 Chinese.  
 Per *Ajax*, six, from Singapore, &c.—406 Chinese.  
 Per *Haitan*, six, from Fochow, &c.—Capt. Blutzen, and 87 Chinese.  
 DEPARTED.  
 Per *Natal*, six, from Hongkong for Saigon.—Mr. Luong Joseph, for Marseilles.—Messrs. Delin Arlegui, Plo Cristomo, and John Adams, from Yokohama for Saigon.—Messrs. Gardin, and Octave, for Saigon.—Messrs. Browne, H. Heitel, and C. Jordan, for Marseilles.—Mr. Robert, Mrs. Robert, Tonabill, Miss Destrez, Messrs. Baker and Malby, from Shanghai for Saigon.—1 officer and 2 soldiers, for Marseilles.—Messrs. H. Harris, F. S. Deacon, D. Buchanan, A. Wille, and L. Villomoy.  
 Per *Heitor*, six, for Singapore, &c.—3 Europeans and 508 Chinese.  
 REPORTS.  
 The British sloop *Mutine* reports that she left Amoy on the 15th instant. Had light easterly breeze and showery weather.  
 The British steamship *Ajax* reports that she left London on the 3rd ultimo, and Singapore on the 17th instant. Had fine monsoon to Paracel; thence had variable wind and rain to port.  
 The British steamship *Haitan* reports that she left Fochow on the 12th instant. Had light easterly breeze and fine weather throughout. Left Amoy on the 15th. Had light variable air and dull overcast weather. Left Swatow on the 16th. Had light westerly breeze with heavy south-east swell and dull overcast weather. In Fochow, the steamships *Guthrie* and *Tartar*. In Swatow, the steamship *Chow-chow-fo*.

## Post Office.

A MAIL WILL CLOSE  
 For Swatow, Amoy, and Fochow.—Per *Halphong* to-morrow, the 18th instant, at 10.30 A.M.  
 For Straits and Calcutta.—Per *Amoy* to-morrow, the 18th instant, at 2.10 P.M.  
 For Straits and Calcutta.—Per *Kutiang* to-morrow, the 18th instant, at 2.30 P.M.  
 For Sydney and Adelaide.—Per *Guthrie* to-morrow, the 18th instant, at 3.30 P.M.

## SHIPPING IN HONGKONG.

## STEAMERS.

BENLOE, British steamer, 1,158, R. Farguhar, 10th July, Kobe 3rd July, Coals and Matcha.—Ed. Schellman & Co.  
 CITY OF PEKING, American steamer, 3,120, J. M. Cawley, 11th July, San Francisco 14th June, Honolulu 22nd, and Yokohama 8th July, Mails and General.—P. M. S. S. Co.  
 DON JUAN, Spanish steamer, 656, R. Beltran, 3rd May, Manila 30th April, General.—Brandao & Co.  
 EUPHRATES, British steamer, 1,200, J. Edwards, 15th July, Rangoon 3rd July, Rice.—Russell & Co.  
 FAME, British steamer, 117, W. W. Allan, Hongkong Government tender.  
 FELBRIDGE, British steamer, 1,336, John Ritchie, 3rd May, Saigon 30th April, Rice.—Russell & Co.  
 FRIE, Danish steamer, 397, C. A. Lund, 10th July, Pakhoi 7th July, and Hallow 9th, General.—Arnhold, Karberg & Co.  
 HAIPHONG, British steamer, 1,120, Harris, 15th July, Fochow 13th July, General.—D. Laprak & Co.  
 HAIPHONG, French steamer, 874, Aubert, 15th July, Haiphong 15th July, General.—Messageries Maritimes.  
 KUTANG, British ship, 1,495, W. O. M. Young, 13th July, Calcutta 26th June, Penang 3rd July, and Singapore 7th, General.—Jardine, Matheson & Co.  
 MARIE, German steamer, 704, C. A. Hundewadt, 14th July, Halphong 12th July, Rice and General.—A. R. Marty.  
 PRUMPT, German steamer, 1,541, U. Johannsen, 1st July, Hamburg, via Batoum, and June, General.—Schneider & Co.  
 PHRA CHAM KAO, British steamer, 1,011, J. Fowler, 14th July, Bangkok 8th July, General.—Yuen Fat Hong.  
 PILOT FINN, British steamer, 161, A. Stopan, Hongkong and Whampoa Dock Co.  
 PRESTO, German steamer, 655, T. Jensen, 15th July, Bangkok 9th July, Rice.—Siemssen & Co.  
 PROPORTIS, British steamer, 1,387, Wm. H. Farrand, 12th July, Koh-el-chang 5th July, Rice.—Arnhold, Karberg & Co.  
 RECORD, British steamer, 696, R. A. E. Brecken, 12th July, from a cruise.—E. E. & C. Telegraph Co.  
 SIKHAN, British steamer, 845, Stowell, 1st July, Bangkok 24th June, Rice.—Kien Tye Long.  
 SMITH, Chinese steamer, 703, A. McIntosh, 16th July, Amoy 15th July, General.—Malcampo & Co.  
 TAINANG, British steamer, 1,515, W. H. Jackson, 17th June, Swatow 16th June, General.—Jardine, Matheson & Co.  
 TSINAN, British steamer, 1,408, J. Arthur, 14th July, Australian Port 2nd June, Coal and General.—Butterfield & Swire.

## SAILING VESSELS.

DANIEL T. JENNY, American ship, 1,620, Rodick, 28th March, New York 4th Nov., Petroleum.—Orden.  
 ELISE, German ship, 1,348, F. Rowell, 27th May, New York 5th January, Petroleum.—Captain.  
 ELKORNO, Chinese bark, 457, Optum Examination hulk, Stonecutters Island.—Chinese Customs.  
 GEORGE SKALFIELD, American ship, 1,276, A. S. Dunning, 11th July, New York 7th Feb., Kerosene Oil.—Russell & Co.  
 ISLAND CITY, British bark, 421, D. Law, 2nd July, Albany 8th May, Sandalwood.—Orden.  
 LANDSEY, American ship, 1,400, A. H. Laffin, 27th May, New York 21st Dec., Kerosene Oil.—Russell & Co.  
 OSAKA, British bark, 517, Jones, 1st July, Cebu 19th June, Sugar.—Orden.  
 PAPA, German bark, 748, C. L. Henne, 4th June, Hamburg 25th Jan., General.—Siemssen & Co.  
 PARAMITA, American ship, 1,498, C. D. Prescott, 28th May, New York 7th Dec., Petroleum.—Adamson, Bell & Co.  
 RICHARD PARSONS, American bark, 1,116, Geo. A. Freeman, 22nd June, New York 19th Feb., Kerosene Oil.—Russell & Co.  
 SARA MERSEDES, Peruvian schooner, 245, A. Merseides, 4th July, Saigon 27th June, Rice.—Captain.  
 TILLIE BAKER, American bark, 683, Jas. H. Carey, 27th June, Honolulu 19th May, Ballast.—Captain.  
 VELOCITY, British bark, 495, R. Martin, 18th June, Honolulu 3rd May, General.—Chinese.  
 WM. LE LACHUR, British bark, 575, E. Warner, 10th June, Laguanman 9th June, Wood.—Wieler & Co.  
 Z. RING, British ship, 1,375, McLeod, 27th May, New York 20th Nov., Petroleum.—Russell & Co.

## Intimations.

## GRIFFITH'S

NEW PHOTOGRAPHIC STUDIO,  
 No. 2, Duddell Street,  
 (Between the New Oriental Bank, and  
 Mr. Lammer's Auction Rooms),  
 Entrance from Duddell Street or Ice House St.  
 MR. GRIFFITH'S STUDIO is open daily from 8 A.M. to 5 P.M. for producing First-class PHOTOGRAPHIC PORTRAITURE in all the newest styles. Views of Hongkong and the Coast Ports, with choice illustrations of Chinese life and character, always ready.  
 Portraits enlarged to life size and painted in Oil or Water Colours by First-class Artists. Miniatures on Ivory, and all kinds of reproductions.  
 Hongkong, 2nd April, 1890. [542]

## NOTICE.

THOMAS KERR & CO.  
 ENGINEERS, BOILER-MAKERS  
 AND  
 CONTRACTORS.  
 YAU-MAT-TE ENGINEERING WORKS,  
 Kowloon.  
 OFFICE—No. 23, Pottinger Street.  
 Hongkong, 6th June, 1890. [26]  
 Geo. Fenwick & Co.,  
 LIMITED,  
 VICTORIA FOUNDRY, WANCHAI.  
 ENGINEERS, IRON AND BRASS  
 FOUNDERS, GOVERNMENT & GENERAL  
 CONTRACTORS, &c.  
 Established 1880.  
 Hongkong, 20th January, 1890. [193]

## Antiminations.

ONE BOX OF CLARKE'S B41 PILLS  
 is warranted to cure all discharges from the Urinary Organs, in either sex (acquired or constitutional), Gravel and Pains in the Back. Guaranteed free from Mercury. Sold in Boxes, 4s. 6d. each, by all Chemists and Patent Medicine Vendors throughout the World. Proprietors: The Lincoln and Midland Counties Drug Company, Lincoln, England. [116]

## NOTICE.

HONGKONG & WHAMPOA  
 DOCK COMPANY,  
 LIMITED.  
 SHIPMASTERS AND ENGINEERS  
 are respectfully informed that, if upon their arrival in this HARBOUR none of the COMPANY'S FOREMEN should be at hand, ORDERS FOR REPAIRS, if sent to the HEAD OFFICE, No. 14, Praya Central, will receive prompt attention.  
 In the event of complaints being found necessary, communication with the Undersigned is requested, when immediate steps will be taken to rectify the cause of dissatisfaction.  
 D. GILLIES,  
 Secretary.  
 Hongkong, 25th August, 1889. [15]

Dr. Knorr's  
 ANTIPIRYNE.  
 (Dose for Adults: 15 to 35 grains 3 or 4 times a day.)

IS the most approved and most efficacious remedy in cases of HEADACHE, MIGRAINE, NEURALGIA, RHEUMATISM, FEVER, TYPHUS, ERYSIPELAS, HOOPING-COUGH, and many other complaints. It is also the very best Antiseptic. Highly recommended by the medical Faculty. To be had from every reputed Chemist and Druggist. Ask for Dr. KNORR'S ANTIPIRYNE! Each Tin bears the inventor's signature, "Dr. KNORR" in red letters.  
 Supplies constantly on hand at the China Export, Import, and Bank Co.—Sole Agents for China. Beware of spurious imitations! Hongkong 10th May, 1888. [124]

## NOTICE.

JAYE'S SANITARY COMPOUNDS  
 COMPANY, LIMITED.  
 JAYE'S WOOD PRESERVER OR  
 ANTISEPTIC PAINT.  
 THE Undersigned have this day been appointed SOLE AGENTS for the sale of these PERFECT DISINFECTANTS, and are prepared to supply quantities to suit purchasers, at Wholesale Prices. Extra Special terms for Shipping and large Orders.  
 Sir ROBERT RAWLINSON, C.B., C.E., Chief Sanitary Engineer, Local Government Board London, says  
 "It is the best Disinfectant in use."  
 W. G. HUMPHREYS & Co.,  
 Bank Buildings.  
 Hongkong 10th June, 1888. [12]

## INTIMATION.

F. Blackhead & Co.,  
 SHIP-CHANDLERS, SAIL-MAKERS,  
 AND  
 PROVISION MERCHANTS,  
 NAVY CONTRACTORS,  
 GENERAL COMMISSION AGENTS,  
 No. 11, Praya Central,  
 (Opposite Padder's Wharf).  
 SOLE AGENTS  
 for  
 RAHTJEN'S  
 GENUINE  
 COMPOSITION  
 FOR  
 THE BOTTOMS OF IRON SHIPS.  
 HARTMANN'S GREY PAINT, specially manufactured for coating the inside of STEEL SHIPS.  
 CARBOLINEUM AVENARIUS  
 PRESERVATIVE AGAINST  
 ROTTING, DECAY, &c., of WOOD.



CHR. MOTZ & Co., BORDEAUX CLARETS  
 MAX HAASEN'S FRANKFURT ON M.  
 CONSERVED MEATS,  
 VEGETABLES AND FRUIT  
 CEMENT from the celebrated Factory of Hemmings.  
 SWEDISH TAR and OREGON PINE LUMBER.  
 FLENSBURG STOCKBEER.  
 ENGINEERS' and BLACKSMITHS' MACHINERY and TOOLS.  
 EVERY KIND OF  
 SHIP'S STORES and REQUISITES  
 ALWAYS IN STOCK  
 AT  
 REASONABLE PRICES.  
 ALL KINDS OF  
 COALS  
 SUPPLIED AT THE SHORTEST NOTICE  
 Hongkong, 26th June, 1890. [130]  
 TOURISTS  
 ARE cordially invited to call and inspect our choice collection of Japanese and Chinese FINE ART CURIOS, which is unequalled in Japan.  
 Every article guaranteed as represented. No trouble to show goods. One price only.  
 DEAKIN BROS. & Co.,  
 16 Band, Yokohama,  
 next door to  
 Farwell's Photograph Studio.

## Notices of Firms.

## NOTICE.

THE PARTNERSHIP heretofore subsisting between EDWARD CONSTANT RAY and GEORGE HENDERSON WATT is this day dissolved by Mutual Consent.  
 E. C. RAY.  
 GEO. H. WATT.  
 Hongkong, 3rd July, 1890. [1000]  
 WITH reference to the above the business of SHIP, SHARE, and GENERAL BROKER will be continued by me in my own name.  
 E. C. RAY.  
 Hongkong, 3rd July, 1890. [1001]  
 NOTICE.  
 DURING my temporary absence from the Colony Mr. J. W. CROKER is appointed Acting MANAGER for Geo. Fenwick & Co., Ltd.  
 GEO. FENWICK,  
 General Manager.  
 Hongkong, 2nd July, 1890. [995]

## Consignees.

PACIFIC MAIL STEAMSHIP COMPANY.  
 NOTICE.  
 CONSIGNEES of Cargo per Steamship "CITY OF PEKING"  
 The above Steamer having arrived, Consignees of Cargo are hereby requested to send in their Bills of Lading for Counter-signature, and to take immediate delivery of their Goods from alongside.  
 Cargo impeding the discharge of the Vessel will be landed and stored at Consignees' risk and expense.  
 CHAS. D. HARMAN,  
 Agent.  
 Hongkong, 14th July, 1890. [3]

## To be Let.

TO LET.  
 With Immediate Possession.  
 GROUND FLOOR No. 2, Blue Buildings.  
 2ND FLOOR No. 2, Blue Buildings.  
 1ST FLOOR No. 3, Blue Buildings.  
 Apply to  
 THE HONGKONG LAND INVESTMENT & AGENCY Co., Ltd.  
 Hongkong, 1st July, 1890. [988]  
 TO LET.  
 TWO COMMODIOUS HOUSES in Carlton Terrace, Queen's Road East. Rent moderate.  
 Apply to  
 G. R. LAMMERT.  
 Hongkong, 1st July, 1890. [999]  
 TO LET.  
 No. 3, MORRISON HILL.  
 Immediate entry.  
 Apply to  
 G. C. ANDERSON,  
 13, Praya Central.  
 Hongkong, 22nd April, 1890. [558]  
 TO LET.  
 A HOUSE in WEST TERRACE.  
 Immediate entry.  
 Apply to  
 G. C. ANDERSON,  
 13, Praya Central.  
 Hongkong, 3rd May, 1890. [511]  
 TO LET.  
 ONE LARGE ROOM on the Ground Floor of 13, Praya Central. Suitable for an Office.  
 Apply to  
 G. C. ANDERSON,  
 13, Praya Central.  
 Hongkong, 28th March, 1890. [497]  
 TO LET.  
 TWO FLOORS of HOUSE No. 8, Stanley Street.  
 Apply to  
 ROZARIO & Co.  
 Hongkong, 10th July, 1890. [1031]  
 TO LET.  
 NOS. 21 and 25, ELGIN ROAD, behind the Old Union Church.  
 Apply to  
 ACHEE & Co.,  
 17, Queen's Road Central.  
 Hongkong, 19th June, 1890. [554]  
 TO BE LET,  
 just below Peak Flats.  
 BAHAR LODGE—FURNISHED.  
 Apply to  
 HUGHES & EZRA.  
 Hongkong, 27th April, 1890. [632]  
 TO LET.  
 FIRST FLOOR of HOUSE, 15, Praya Central.  
 2ND FLOOR of HOUSE, No. 64, Queen's Road Central.  
 Apply to  
 LAI HING & Co.,  
 No. 153, Queen's Road Central.  
 Hongkong, 22nd March, 1890. [459]  
 TO LET.  
 Possession from 1st June next.  
 HOUSE No. 22, ELGIN TERRACE.  
 Apply to  
 J. SAMUEL,  
 No. 24, Elgin Terrace.  
 Hongkong, 7th May, 1890. [727]  
 TO LET.  
 NO. 9, SEYMOUR TERRACE.  
 NO. 4, OLD BAILEY STREET.  
 OFFICES and CHAMBERS in Connaught House, Queen's Road Central.  
 NO. 7, SEYMOUR TERRACE.  
 NO. 13, SEYMOUR TERRACE.  
 Apply to  
 DAVID SASSOON, SONS & Co.  
 Hongkong, 4th July, 1890. [113]  
 A. G. GORDON & CO.,  
 LIMITED.  
 ENGINEERS, LAUNCH BUILDERS,  
 GENERAL and GOVERNMENT  
 CONTRACTORS, IRONMONGERS, COMMISSION AGENTS, VALUERS, IRON and TIMBER MERCHANTS.  
 WORKS:  
 BOWRINGTON, EAST POINT.  
 OFFICE:  
 9, PRAYA CENTRAL.  
 STEAM LAUNCH COMPANY, LIMITED.  
 Hongkong, 1st May, 1890. [144]

## For Sale.

## FOR SALE.

AT WHOLESALE PRICES.  
 SACCONNI'S SHERRY, PORT, IRROYS CHAMPAGNE, CLARET, HOCK, BRANDIES, WHISKIES, MACHINERY, GAS ENGINES, SINGERS, SEWING MACHINES, SCALES, PAINTS, OILS and VARNISH, BICYCLES and TRICYCLES, SODA WATER, MACHINERY, JEWELS, SANITARY COMPOUNDS, BICYCLE WHEELS for JINRICKSHAWS.  
 Apply to  
 W. G. HUMPHREYS & Co.,  
 Bank Buildings.  
 Hongkong, 21st November, 1889. [11]  
 HONGKONG TIMBER  
 YARD, WANCHAI.  
 OREGON PINE SPARS and LUMBER  
 Always on Hand.  
 L. MALLORY.  
 Hongkong 24th June 1890. [955]  
 FOR SALE  
 THE useful and commodious Steam Launch "E. L. K."  
 Length over all ..... 36 feet.  
 Breadth ..... 7 "  
 Depth ..... 5 "  
 Speed 8 knots an hour.  
 This Launch has just undergone a complete overhaul, new decks laid, and the bottom re-coppered. The Engines and Boiler have been put in first class order and new wiring fitted.  
 As this boat, with her full complement of coals, water, &c., on board